Future of Electronic Waste Management in California
Stakeholder Workshop June 20, 2017
Project Description and Problem Statement

Can the current Covered Electronic Waste (CEW) program continue to function effectively in light of the changing nature and costs of managing **existing** covered devices, and should the program be expanded to include devices that are not currently covered by the program? These are the questions that CalRecycle is exploring in this long-term initiative to examine current conditions and future options for electronic waste management in California. Drawing from over a dozen years of program operational experience since the signing of the Electronic Waste Recycling Act of 2003, as well as the knowledge gained by the many states that administer electronic waste management programs of their own, CalRecycle seeks to identify the strengths and weaknesses of current and alternative program approaches. The ultimate goal will be a public document that describes options aimed at bolstering the effective management of the electronic waste stream and the resources it contains.

The Electronic Waste Recycling Act of 2003 (SB 20) established a variety of measures intended to:

- develop an infrastructure to provide convenient recycling opportunities,
- reduce the inappropriate disposal of certain electronic devices,
- limit the sale of certain hazardous products in the state, and
- require notification and reporting of product sales and waste management activities.

It also directs CalRecycle to establish recovery and recycling rates based on the "average net cost" to collect and properly manage CEW. Payments are made on the weight of material that is compliantly processed.

Since then, California's existing electronic waste management program has been highly successful in collecting and properly handling covered electronic waste generated in the state. The current program has fostered a robust collection and recycling network while significantly relieving local jurisdictions and businesses of the cost burden of managing these wastes and providing free and convenient collection opportunities for all generators.

However, by definition, the covered electronic waste (CEW) recycling program currently addresses only certain video display devices. Historically, most of the covered devices that came through the program were CRTs. In recent years however, light-weight and compact devices such as laptops and tablets, or other universal waste, have been managed by program participants. These technologies often have less intrinsic material value, contain components requiring special handling, and are more difficult and costly to manage. Since payment rates in the CEW program are weight-based, payments to collectors and recyclers are decreasing, even as labor costs to dismantle the light-weight devices are increasing. Meanwhile, global economics are disrupting commodity markets and lowering scrap values.

These dynamics are particularly difficult for California businesses that accept non-covered devices such as printers, computers, keyboards, stereos, DVD players, etc., in order to provide the comprehensive services expected by their customers. In the past, the CEW payment for the heavy CRT devices covered the costs of managing non-CRTs and non-covered e-waste so recyclers would typically accept all e-waste just to acquire the CRT portions. Recently, some recyclers have started charging a fee to accept non-covered wastes or for collection in rural areas where transportation costs are higher.

Several additional policy drivers are prompting CalRecycle to undertake the project at this time:

1) Materials management costs to local government entities – Form 303 reports indicate that 40% (nearly 42 million pounds) of Household Hazardous Waste volume is still e-waste.
2) Landfill disposal – New rules allow compliant disposal as hazardous waste of certain residuals derived from the processing of CEW. But even with its unique regulatory environment ("all e-waste is hazardous waste"), the Act still encourages proper recycling of e-waste over disposal. Despite this, the Waste Characterization Study indicated that 0.9% (274,878 tons) of the waste stream in non-hazardous municipal solid waste landfills is electronics. At the same time, CalRecycle must reach the state goal of 75% source reduction, recycling and composting by 2020.
3) Protection of public health and safety, including ensuring proper processing and ultimate destination of CEW and preventing illegal dumping.
4) Supporting in-state jobs and realizing the economic benefit of recycling; the current e-waste recycling infrastructure includes 31 recyclers and 421 collectors.
5) Potential impact of waste electronics management on greenhouse gas reduction goals – i.e., the ability to recover metals and plastics from e-waste could affect the amount of virgin metals and fossil fuel extraction (and associated greenhouse gas emissions) needed for production of new electronic devices.
6) Recent Supreme Court decision and state legislation concerning right-to-repair issues, along with current global trend towards instituting modulated fees to encourage design for the environment.

In recognition of these upcoming challenges, CalRecycle's Futures project has solicited stakeholder involvement in exploring various approaches for a comprehensive e-waste management system. E-Waste stakeholders participated in a survey in July 2016 and subsequent workshops in September 2016 and March and June 2017. Presentations and informal notes from the workshops, including a summary of survey findings, can be found on CalRecycle's Future of Electronic Waste website.

As CalRecycle moves forward with the project, to date it has focused on programmatic models that would require legislation: enhancing the current SB 20 system with new devices, and developing new models for e-waste management.

1. Enhancing the Current System – This model would maintain the existing fee and payment system established in SB 20 for covered electronic wastes, but make changes that could be accomplished in a relatively short time frame and have significant positive benefits for the CEW payment system. Specifically, this would entail adding new products to the definition of a "covered electronic waste".
2. New Electronic Waste Management Model(s) – This approach involves analyzing and developing an entirely new model for e-waste management in California based on a Product Stewardship approach. Applicable aspects of the "Enhancing the Current System" model would be incorporated into the new models.
    a. Maintain the current CEW payment system for covered devices and implement a Product Stewardship program for non-covered electronic waste.
    b. Develop a Product Stewardship model for all e-waste, replacing the current fee and payment system.

As part of this, CalRecycle also is examining the role of reuse and repair and whether portions of the Electronic Waste Recycling Act should be amended to address these types of issues.

Based on input from the survey and workshops, CalRecycle will develop brief background papers on the above topics and continue to seek stakeholder feedback. Additional workshops will be scheduled as needed. The project will culminate in a presentation at a CalRecycle Public Meeting in late 2017 describing the potential models and possibly making policy recommendations.